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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/577,304	04/28/2006	Hideaki Fujita	65472 (70868)	8038
21874 7590 06/28/2007 EDWARDS ANGELL PALMER & DODGE LLP P.O. BOX 55874 BOSTON, MA 02205			EXAMINER SONG, SARAH U	
			ART UNIT 2874	PAPER NUMBER
			MAIL DATE 06/28/2007	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

**Application No.**

10/577,304

**Applicant(s)**

FUJITA ET AL.

**Examiner**

Sarah Song

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04/28/6 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
- Paper No(s)/Mail Date 0406,0906.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. **Claims 1, 5, 15, 16 and 19-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Minamio et al. (U.S. Patent 6,864,117).**
3. Regarding claims 1, 4, 5, 15, 16, 19 and 20, Minamio et al. discloses an optical element sealing structure comprising a mounting body 3/1 provided with a light transmitting section through which light traveling along a predetermined optical path passes; an optical element (e.g. CCD) 4 having an optical surface which is directed to the light transmitting section, and is mounted such that the optical element blocks the light transmitting section at one end; and a sealing body 6 that is formed in a region excluding the optical path, and seals the optical element mounted on the mounting body. The sealing body is formed in a region of the optical element opposite (i.e. facing) to the mounting body. Note transmitting body 5, lead frame 3 and sub mount 4 wherein the optical element is mounted on the lead frame via the sub mount. The exterior terminal portions 3b are exposed to the atmosphere around the sealing structure. The base 1 permits the sealing structure to be optically coupled with a light-transmitting medium (e.g. lens), thereby constituting an optical coupler.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. **Claims 2, 3, 6-14, 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minamio et al.**

6. Regarding claims 2 and 3, although not expressly disclosed, increasing environmental resistance of the sealing body, providing a connection body with wires for establishing electrical connections, and matching linear expansion coefficients of the materials in the structure would have been obvious to one of ordinary skill in the art for reducing noise, relaxing alignment tolerances, and for improving structural longevity, respectively.

7. Regarding claims 6-9, the selection of any well known material would have been obvious to one of ordinary skill in the art to optimize the desired characteristics of the components. Furthermore, Figure 1 discloses the claimed contact areas, wherein the sealing body and the mounting body are covered with the transmitting body (i.e. the transmitting body is disposed over the sealing body and the mounting body).

8. Regarding claims 10 and 11, although not expressly disclose, it would have been obvious to one having ordinary skill in the art at the time the invention was made to secure the transmitting body to the mounting body using an adhesive for improving structural integrity. A light-transmitting adhesive having a refractive index higher than that of air and filled between the

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optical surfaces would also have been obvious for providing an index-matched medium within the optical path for reducing losses.

9. Regarding claims 12 and 13, positioning section 9 has a stepped taper wherein the diameter is reduced toward the light-receiving surface of the optical element (column 5, lines 4-26).

10. Regarding claim 14, the attachment area between the transmitting body and the sealing body is smaller than the surface area on a side where the sealing body is in contact with the mounting body as seen in Figure 1.

11. Regarding claims 17 and 18, Minamio et al. discloses an aperture but does not disclose the claimed direction of taper (Figure 6). However, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide the reverse taper for a light emitting device, whereas the taper shown for Minamio et al. is for a light-receiving device, in order to optimize the coupling of light propagating in the reverse direction.

#### ***Allowable Subject Matter***

12. Claim 22 is allowed.

13. The following is a statement of reasons for the indication of allowable subject matter: Minamio et al. does not disclose or suggest the sealing molding resin molding step in a state where the mounting body carries thereon the optical element at one end portion, and wherein the mold blocks the light transmitting section at another end portion.

#### ***Conclusion***

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various


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claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Song whose telephone number is 571-272-2359. The examiner can normally be reached on M-Th 7:30am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on 571-272-2344. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Sarah Song  
Primary Examiner  
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